

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently Amended) A method of diagnosis of a transmissible spongiform encephalopathy (TSE) selected from the group consisting of Bovine Spongiform Encephalopathy (BSE), variant Creutzfeldt-Jakob Disease (vCJD), and Creutzfeldt-Jakob Disease (CJD) in a subject suspected of suffering from BSE, vCJD, or CJD, which comprises:

subjecting a sample of a body fluid selected from the group consisting of cerebrospinal fluid (CSF), blood, plasma and serum taken from the subject to mass spectrometry, thereby to determine a test amount of a polypeptide in the sample, wherein the polypeptide is differentially contained in the body fluid of BSE-, vCJD-, or CJD- infected subjects and non- BSE-, vCJD-, or CJD- infected subjects, and is selected from the group consisting of:

(a) a polypeptide having a molecular weight that is within 1% of ~~about~~ 1010, 1100, 1125, 1365, 3295, 3645, 3890, 3970, 3990, 4030, 4294, 4315, 4436, 4478, 4780, 5820, 6200, 6700, 7500, 7520, 7574, 7630, 7770, 7930, 7975, 7980, 8020, 8600, 8936, 9107, 9145, 9185, 9454, 9950, 10075, 10220, 10250, 11600, 11730, 11800, 13375, 13550, 14043, 15000, 15200, 15400, 15600, 15900, 17839, 30000, 31000 or 31800 Da; and

(b) cystatin C;

comparing the test amount of the polypeptide in the sample to a reference amount of the same polypeptide contained in a sample of a body fluid selected from the group consisting of CSF, blood, plasma, and serum taken from a subject not infected with BSE, vCJD, or CJD; and

wherein an increase in the test amount of the polypeptide in the body fluid of the subject suspected of suffering from BSE, vCJD, or CJD, compared to the reference amount of the polypeptide in the body fluid of the non-infected subject, indicates BSE, vCJD, or CJD in the subject suspected of suffering from BSE, vCJD, or CJD.

2. (Previously Presented) The method according to Claim 1, in which the polypeptide is present in the body fluid of BSE-, vCJD-, or CJD- infected subjects and not present in the body fluid of non- BSE-, vCJD-, or CJD-infected subjects, whereby the presence of the polypeptide in a body fluid sample in a subject suspected of suffering from BSE, vCJD, or CJD is indicative of BSE, vCJD, or CJD.

3. (Cancelled)

4. (Previously Presented) The method according to Claim 1, in which the mass spectrometry is laser desorption/ionization mass spectrometry.

5. (Previously Presented) The method according to Claim 4, in which the sample is adsorbed on a test strip or on a protein chip array having an immobilized metal affinity capture (IMAC), hydrophobic, strong anionic or weak cationic exchange surface capable of binding the polypeptide.

6. (Previously Presented) The method according to Claim 4, in which the polypeptide is determined by surface-enhanced laser desorption/ionization (SELDI) and time of flight mass spectrometry (TOF-MS).

7. (Canceled)

8. (Previously Presented) The method according to Claim 1, in which a plurality of peptides is determined in the sample.

9. (Previously Presented) The method according to Claim 1, in which the TSE is Creutzfeldt-Jakob disease (CJD).

10. (Previously Presented) The method according to Claim 9, in which the TSE is sporadic Creutzfeldt-Jakob Disease (CJD) or variant Creutzfeldt-Jakob Disease (vCJD).

11. (Currently Amended) The method according to Claim 9, in which one or more polypeptides having a respective molecular weight that is within 1% of ~~about~~ 4780, ~~about~~ 6700, ~~about~~ 8600 or ~~about~~ 13375 Da is determined, and the presence of one or more of such polypeptides in a subject suspected of suffering from CJD is indicative of CJD.

12. (Cancelled)

13. (Currently Amended) The method according to Claim 9, in which a polypeptide having a molecular weight that is within 1% of ~~about~~ 7770 Da is determined, and the presence of such polypeptide in a subject suspected of suffering from CJD is indicative of CJD.

14. (Cancelled)

15. (Currently Amended) The method according to Claim 9, in which a polypeptide having a molecular weight that is within 1% of ~~about~~ 7574, ~~about~~ 7930, ~~about~~ 7975 or ~~about~~ 8020 Da is determined, and the presence or increased amount of one or more of such polypeptides in a subject suspected of suffering from CJD is indicative of CJD.

16. (Previously Presented) The method according to Claim 1, in which the TSE is Bovine Spongiform Encephalopathy (BSE).

17. (Currently Amended) The method according to Claim 16, in which the polypeptide has a molecular weight that is within 1% of about 10220 Da, and the presence of the polypeptide in a subject suspected of suffering from BSE is indicative of BSE.

18-28. (Cancelled)

29. (Currently Amended) A kit for diagnosis of a TSE selected from the group consisting of BSE, vCJD, and CJD, comprising:

a test strip or protein chip array having an immobilized metal affinity capture (IMAC), hydrophobic, strong anionic, or weak cationic exchange surface capable of binding a polypeptide onto which a sample of body fluid selected from the group consisting of cerebrospinal fluid (CSF), blood, plasma, and serum is adsorbed, and for placement in a mass spectrometer, thereby to determine a test amount of a polypeptide in the sample, wherein the polypeptide is differentially contained in the body fluid of BSE-, vCJD-, or CJD- infected subjects and non-BSE-, vCJD-, or CJD- infected subjects, and is selected from the group consisting of:

(a) a polypeptide having a molecular weight that is within 1% of about 1010, 1100, 1125, 1365, 3295, 3645, 3890, 3970, 3990, 4030, 4294, 4315, 4436, 4478, 4780, 5820, 6200, 6700, 7500, 7520, 7574, 7630, 7770, 7930, 7975, 7980, 8020, 8600, 8936, 9107, 9145, 9185, 9454, 9950, 10075, 10220, 10250, 11600, 11730, 11800, 13375, 13550, 14043, 15000, 15200, 15400, 15600, 15900, 17839, 30000, 31000 or 31800 Da; and

(b) cystatin C;

wherein diagnosis of BSE, vCJD, or CJD is determined by comparing the test amount of polypeptide to a reference amount of the same polypeptide, wherein a significant increase in the test amount of the polypeptide in the body fluid of the subject suspected of suffering from BSE,

vCJD, or CJD, compared to the reference amount of polypeptide represents that the subject is suspected of suffering from BSE, vCJD, or CJD infection.

30. (Previously Presented) The kit according to Claim 29, in which the test strip contains an adsorbent for adsorption of the polypeptide.

31. (Previously Presented) The kit according to Claim 29, further comprising a washing solution for removal of unbound or weakly bound materials from the test strip.

32-47. (Cancelled)

48. (Currently Amended) A method of diagnosis of a transmissible spongiform encephalopathy (TSE) selected from the group consisting of Bovine Spongiform Encephalopathy (BSE), variant Creutzfeldt-Jakob Disease (vCJD), and Creutzfeldt-Jakob Disease (CJD) in a subject suspected of suffering from BSE, vCJD, or CJD, which comprises:

subjecting a sample of a body fluid selected from the group consisting of cerebrospinal fluid (CSF), blood, plasma and serum taken from the subject to mass spectrometry, thereby to determine a test amount of a polypeptide in the sample, wherein the polypeptide is differentially contained in the body fluid of BSE-, vCJD-, or CJD- infected subjects and non- BSE-, vCJD-, or CJD- infected subjects, and is selected from the group consisting of:

(a) a polypeptide having a molecular weight that is within 1% of ~~about~~ 1010, 1100, 1125, 1365, 3295, 3645, 3890, 3970, 3990, 4030, 4294, 4315, 4436, 4478, 4780, 5820, 6200, 6700, 7500, 7520, 7574, 7630, 7770, 7930, 7975, 7980, 8020, 8600, 8936, 9107, 9145, 9185, 9454, 9950, 10075, 10220, 10250, 11600, 11730, 11800, 13375, 13550, 14043, 15000, 15200, 15400, 15600, 15900, 17839, 30000, 31000 or 31800 Da; and

(b) cystatin C;

comparing the test amount of the polypeptide in the sample to a reference amount of the same polypeptide contained in a sample of a body fluid selected from the group consisting of CSF, blood, plasma, and serum taken from a subject not infected with BSE, vCJD, or CJD; and

wherein a decrease in the test amount of the polypeptide in the body fluid of the subject suspected of suffering from BSE, vCJD, or CJD, compared to the reference amount of the polypeptide in the body fluid of the non-infected subject, indicates BSE, vCJD, or CJD in the subject suspected of suffering from BSE, vCJD, or CJD.

49. (Previously Presented) The method according to Claim 48, in which the polypeptide is not present in the body fluid of BSE-, vCJD-, or CJD- infected subjects and present in the body fluid of non- BSE-, vCJD-, or CJD-infected subjects, whereby the non-presence of the polypeptide in a body fluid sample is indicative of BSE, vCJD, or CJD.

50. (Previously Presented) The method according to Claim 48, in which the mass spectrometry is laser desorption/ionization mass spectrometry.

51. (Previously Presented) The method according to Claim 50, in which the sample is adsorbed on a test strip or on a protein chip array having an immobilized metal affinity capture (IMAC), hydrophobic, strong anionic or weak cationic exchange surface capable of binding the polypeptide.

52. (Previously Presented) The method according to Claim 50, in which the polypeptide is determined by surface-enhanced laser desorption/ionization (SELDI) and time of flight mass spectrometry (TOF-MS).

53. (Previously Presented) The method according to Claim 48, in which a plurality of peptides is determined in the sample.

54. (Previously Presented) The method according to Claim 48, in which the TSE is Creutzfeldt-Jakob disease (CJD).

55. (Previously Presented) The method according to Claim 54, in which the TSE is sporadic Creutzfeldt-Jakob Disease (CJD) or variant Creutzfeldt-Jakob Disease (vCJD).

56. (Currently Amended) The method according to Claim 54 in which one or more polypeptides having a respective molecular weight that is within 1% of ~~about~~ 3970, ~~about~~ 3990, ~~about~~ 4294, ~~about~~ 4478, ~~about~~ 10075, ~~about~~ 11730, ~~about~~ 14043 or ~~about~~ 17839 Da is determined, and the absence of one or more of such polypeptides in a subject suspected of suffering from vCJD or CJD is indicative of vCJD or CJD.

57. (Currently Amended) The method according to Claim 54, in which a polypeptide having a molecular weight that is within 1% of ~~about~~ 3295, ~~about~~ 4315, ~~about~~ 4436, ~~about~~ 6200, ~~about~~ 8936, ~~about~~ 9107, ~~about~~ 9145, ~~about~~ 9185, ~~about~~ 9454 or ~~about~~ 13550 Da is determined, and the absence or decreased amount of one or more of such polypeptides in a subject suspected of suffering from vCJD or CJD is indicative of vCJD or CJD.

58. (Previously Presented) The method according to Claim 48, in which the TSE is Bovine Spongiform Encephalopathy (BSE).

59. (Currently Amended) A kit for diagnosis of a TSE selected from the group consisting of BSE, vCJD, and CJD, comprising:

a test strip or protein chip array having an immobilized metal affinity capture (IMAC), hydrophobic, strong anionic, or weak cationic exchange surface capable of binding a polypeptide onto which a sample of body fluid selected from the group consisting of cerebrospinal fluid (CSF), blood, plasma, and serum is adsorbed, and for placement in a mass spectrometer, thereby to determine a test amount of a polypeptide in the sample, wherein the polypeptide is differentially contained in the body fluid of BSE-, vCJD-, or CJD- infected subjects and non-BSE-, vCJD-, or CJD- infected subjects, and is selected from the group consisting of:

- (a) a polypeptide having a molecular weight that is within 1% of ~~about~~ 1010, 1100, 1125, 1365, 3295, 3645, 3890, 3970, 3990, 4030, 4294, 4315, 4436, 4478, 4780, 5820, 6200, 6700, 7500, 7520, 7574, 7630, 7770, 7930, 7975, 7980, 8020, 8600, 8936, 9107, 9145, 9185, 9454, 9950, 10075, 10220, 10250, 11600, 11730, 11800, 13375, 13550, 14043, 15000, 15200, 15400, 15600, 15900, 17839, 30000, 31000 or 31800 Da; and

- (b) cystatin C;

wherein diagnosis of TSE is determined by comparing the test amount of polypeptide to a reference amount of the same polypeptide, wherein a significant decrease in the test amount of the polypeptide in the body fluid of the subject suspected of suffering from BSE, vCJD, or CJD, compared to the reference amount of polypeptide represents that the subject is suspected of suffering from BSE, vCJD, or CJD infection.

60. (Previously Presented) The kit according to Claim 59, in which the test strip contains an adsorbent for adsorption of the polypeptide.

61. (Previously Presented) The kit according to Claim 59, further comprising a washing solution for removal of unbound or weakly bound materials from the test strip.